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Instruction Manual

NEURODYN 10 CHANNELS

Manufactured by
Ibramed - Indústria Brasileira de Equipamentos Médicos EIRELI
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SYMBOL DEFINITIONS

BELOW ARE THE DEFINITIONS OF THE SYMBOLS USED ON THE EQUIPMENT AND THROUGHOUT THE INSTRUCTIONS FOUND IN THIS MANUAL. UNDERSTAND THESE SYMBOLS AND THEIR DEFINITIONS BEFORE OPERATING THIS EQUIPMENT.

Caution! Refer to user manual.

TYPE BF Electrical equipment.

Dangerous voltage.

CLASS II Electrical equipment.

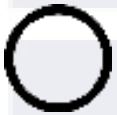
IPXO

Not protected against the harmful effects of water penetration.

Sensitivity against electrostatic discharge.

Start treatment.

Stop treatment.



Off switch.

On switch.

V~

Voltage in AC (Alternating Current).

~ line

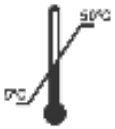
Electrical Network in AC (Alternating Current).

SYMBOL DEFINITIONS

CARTON

Fragile.

This side up.


Limits of temperature for storage and packaging in °C (Celsius Degrees).

Keep away from the rain.

Stacking up.

Do not use if the packaging is damaged.

Refer to operating instructions for correct product use.

Manufacturer’s name and address.

ABREVIATIONS GLOSSARY

Hz	Hertz (pulses per second)
kHz	Kilohertz
mA	Milliampere
VA	Volt Ampere
ms	Miliseconds
kg	kilograms
Russ	Russian Current
Rise	Time of Increase Gradient
On	Time of Muscular Contraction
Decay	Time of Decrease Gradient
Off	Time of Muscular Relaxation
Cont	Continuous
Sync	Synchronous
Rec	Reciprocal
Seq	Sequential
Des	Desobstruction
Burst	Series of pulses

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FIGURES GLOSSARY

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This user manual allows the user to efficiently use the **NEURODYN 10 CHANNELS** Electro Stimulator. It also gives suggestions for treatment protocols so that you can use your equipment to its full potential.

Consult other resources for additional information regarding the uses of electrotherapy before attempting any treatment on a patient. Users must read, understand and follow the information in this manual for each mode of treatment available, as well as the indications, contraindications, warnings and precautions.

The specifications and instructions in this manual are in effect at the time of its publication. These instructions may be updated at any time at the manufacturer's discretion. Visit our website for updates.

NEURODYN 10 CHANNELS transcutaneous neuromuscular stimulator is a ten-channel stimulator with independent controls for current therapies used in: **RUSSIAN CURRENT** (Burst Modulated Medium Frequency) and **AUSSIE CURRENT** (Burst Modulated Medium Frequency).

Treatment should be administered only under the direct supervision of a health care professional.

PRECAUTIONARY DEFINITIONS

The precautionary instructions found in this section and throughout this manual are indicated by specific symbols. Understand these symbols and their definitions before operating this equipment prior to therapy session.

Text with a "CAUTION" indicator refers to potential safety infractions that could cause minor to moderate injury or damage to equipment.

Text with a "WARNING" indicator refers to potential safety infractions that could cause serious injury and equipment damage.

Text with a "DANGER" indicator refers to potential safety infractions that represent immediately life threatening situations that would result in death or serious injury.

- Read, understand, and practice the precautionary and operating instructions. Know the limitations and hazards associated with the use of any electrical stimulation. Observe the precautionary and operational labels placed on the unit.
- DO NOT operate this unit in an environment where other devices intentionally radiate electromagnetic energy in an unshielded manner.
- Check cables and associated connectors before each use.
- The **NEURODYN 10 CHANNELS** Electro Stimulator is not designed to prevent the infiltration of water or other liquids. The infiltration of water or other liquids could cause malfunction of internal components of the system and therefore create a risk of injury to the patient.
- Disconnect the power plug from the outlet when left unused for long periods of time.

WARNING

- To protect against the risk of fire, only use replacement fuses of the same types and ratings.
- Be sure the unit is grounded by connecting it to a grounded electrical outlet compliant with the applicable national and local electrical codes.
- Powered muscle stimulators should be used only with the lead wires and electrodes recommended for use by the manufacturer.
- Prior to patient treatment become familiar with the operating procedures for each mode of treatment available, as well as the indications, contraindications, warnings and precautions. Consult other resources for additional information regarding the applications of
- Electrotherapy.

  To prevent electrical shock, disconnect the unit from the
- power source before performing any maintenance task.

  Keep electrodes separated during treatment. Electrodes in contact with each other could result in improper stimulation or skin burns.
- Stimulation should not be applied over the anterior neck or mouth.
- Severe spasm of the laryngeal and pharyngeal muscles may occur and the contractions may be strong enough to close the airway or cause breathing difficulties.
- Stimulation should not be applied transthoracically to avoid the introduction of electrical current into the heart which may cause cardiac arrhythmia.
- Stimulation should not be applied over swollen, infected, and inflamed areas or skin eruptions such as phlebitis, thrombophlebitis, varicose veins, etc.
- Stimulation should not be applied on or near cancerous lesions.
- Output current density depends on the electrode size. Improper application may result in patient injury. For any question related to the correct electrode size, consult a licensed practitioner prior to therapy session.

- Patients with an implanted neurostimulation device must not be treated with or be in close range of any shortwave diathermy, microwave diathermy, therapeutic ultrasound diathermy or laser diathermy anywhere on their body. Energy from diathermy (shortwave, microwave, ultrasound and laser) can be transferred through the implanted neurostimulation system, can cause tissue damage, and can result in severe injury or death. Injury, damage or death can occur during diathermy therapy even if the implanted neurostimulation system is powered "off."

- It is not envisaged the use of these units in places where risk of explosion, such as departments anesthesia or in the presence of an anesthetic mixture flammable with air, oxygen or nitrous oxide.

INDICATIONS FOR USE

Indications for Russian and Aussie (1 kHz/2 ms) waveforms

- Relaxation of muscle spasms.

Prevention or retardation of disuse atrophy.

- Increase local blood circulation.

Muscle re-education.

Maintaining or increasing range of motion.

Additional Indications for Aussie (4 kHz/4 ms) waveform

- Symptomatic relief and management of chronic intractable pain.
- Increase local blood circulation.
- Post-traumatic acute pain.
- Post-surgical acute pain.

Indications for Electrolipolysis

- Stimulation of lipolysis in the treatment of fat located.
- Temporary reduction in the appearance of cellulite.
- Temporary improvement of local blood circulation.

INDICATIONS, CONTRAINDICATIONS, PRECAUTIONS AND ADVERSE REACTIONS

CONTRAINDICATIONS

• Powered muscle stimulators should not be used on patients with cardiac demand pacemakers.

• This device should not be used for symptomatic local pain relief unless etiology is established or unless a pain syndrome has been diagnosed.

• Other contraindications include patients suspected of carrying infectious diseases and/or disease where it is advisable for general medical purposes to suppress heat or fevers.

WARNINGS

• The long-term effects of chronic electrical stimulation are not known.

• Stimulation should not be applied over the carotid sinus nerves, particularly in patients with a known sensitivity to the carotid sinus reflex.

WARNINGS

• Stimulation should not be applied over the neck or mouth.

• Severe spasm of the laryngeal and pharyngeal muscles may occur and the contractions may be strong enough to close the airway or cause breathing difficulties.

• Stimulation should not be applied transthoracically to avoid the introduction of electrical current into the heart which may cause cardiac arrhythmias.

• Stimulation should not be applied transcerebrally.

• Stimulation should not be applied over swollen, infected, or inflamed areas or skin eruptions, such as phlebitis, thrombophlebitis, varicose veins, etc.

• Stimulation should not be applied on or near cancerous lesions.

• Stimulation should not be applied in the presence of electronic control equipment (eg, heart monitors, ECG alarms), which can not work properly when the device electrical stimulation is in use.

• Stimulation should not be applied when the patient is in the bath or shower.

INDICATIONS, CONTRAINDICATIONS, PRECAUTIONS AND ADVERSE REACTIONS

PRECAUTIONS

• Stimulation should not be applied while the patient is sleeping.

• Stimulation should not be applied while the patient is driving, operating machinery, or during any activity in which electrical stimulation can putting the patient at risk of injury.

• Consult the patient's physician before using this device because the device may cause disturbances lethal rhythm cardiac individuals.

• The stimulation should be applied only in normal skin, intact, clean and healthy.

• Safety of powered muscle stimulators for use during pregnancy has not been established.

• Caution should be used for patients with suspected or diagnosed heart problems.

• Caution should be used for patients with suspected or diagnosed epilepsy.

Caution should be used in the presence of the following:

a. When there is a tendency to hemorrhage following acute trauma or fracture;

b. Following recent surgical procedures when muscle contraction may disrupt the healing process;

c. Over the menstruating or pregnant uterus; and

d. Over areas of the skin which lack normal sensation.

• Some patients may experience skin irritation or hypersensitivity caused by the electrical stimulation or electrical conductive medium. The irritation can usually be reduced by using an alternate conductive medium or alternate electrode placement.

• Electrode placement and stimulation settings should be based on the guidance of the prescribing practitioner.

• Powered muscle stimulators should be kept out of the reach of children.

• Powered muscle stimulators should be used only with the lead wires and electrodes recommended by the manufacturer.

ADVERSE REACTIONS

• Skin irritation and burns beneath the electrodes have been reported with the use of powered muscle stimulators.

• Patients may experience headaches and other sensations pain during or after application of stimulation electric near the eyes, head and face.

• Patients should stop using the appliance and should consult their therapists feel the adverse reactions from the use of the device.

SHIPPING DAMAGE

Your **NEURODYN 10 CHANNELS** Electro Stimulator is shipped complete in one carton. Upon receipt, inspect carton and unit for visible and hidden damage. In case of damage, keep all shipping materials including carton and contact the shipping agent responsible for the delivery of the unit. All claims relating to damage during transport should be filed directly with them. The manufacturer will not be liable for any damage during shipping, nor allow for adjustments unless proper formal claim has been filed by the receiver against the carrier. The carton in which your **NEURODYN 10 CHANNELS** Electro Stimulator was received is specially designed to protect the unit during shipping. Please keep all shipping materials in case you need to return your unit for servicing.

INSTALLATION, CARE AND CLEANING

Installation instructions

1. Connect the line cord to the back of the **NEURODYN 10 CHANNELS** Electro Stimulator.
2. Plug the line cord into a grounded wall outlet (100/240V - 50/60 Hz).
3. Plug the electrode cables into the electrode cable connections.
4. Switch on your equipment.

Electro Stimulator Care Instructions

• Avoid areas subject to vibrations.
Install the equipment on a firm and level surface, in open air.
• Do not block ventilation.
• Avoid humid, hot and dusty environments.
• Make sure the area around the network cable is free.
• Do not insert objects into device holes.

Cleaning the NEURODYN 10 CHANNELS Electro Stimulator

Disconnect the system from the power source, wipe with a clean, lint free cloth moistened with water and mild antibacterial soap. If a more sterile cleaning is needed, use a cloth moistened with an antimicrobial cleaner. Do not place the system in liquids.

Environmental protection

NEURODYN 10 CHANNELS is an electronic device and has heavy metals such as lead. Thus, there are risks of contamination to the environment associated with the disposal of this equipment and its accessories at the end of their useful lives. **NEURODYN 10 CHANNELS**, parts and accessories should not be disposed of as waste. Contact the distributor site for information on rules and laws concerning disposal of waste electrical electronic equipment and its accessories.

CAUTION

THE DEVICE AND PARTS CONSUMABLES BE ELIMINATED, THE END OF LIFE USEFUL IN ACCORDANCE WITH FEDERAL STANDARDS AND / OR STATE AND / OR LOCAL COUNTRY.

CAUTION

• It is not envisaged the use of this unit where there is risk of explosion such as anesthesia departments or presence of a flammable anesthetic mixture with air, oxygen or nitrous oxide.

• Using cables, electrodes and other accessories from other manufacturers and / or different from those specified herein and replacement of internal components NEURODYN 10 CHANNELS may result in increased emissions or decreased immunity of the equipment.

• **NEURODYN 10 CHANNELS**, is intended for use only by health care professionals. **NEURODYN 10 CHANNELS**, may cause radio interference or disrupt equipment operations nearby. It may be necessary adopt mitigation procedures, such as reorienting or relocating the equipment or shielding the location.

• RF communication equipment, mobile or portable, can cause interference and affect the functioning of **NEURODYN 10 CHANNELS**.

ELETROMAGNECTIC COMPATIBILITY

NEURODYN 10 CHANNELS is an electromedical equipment that belongs to Group 2 Class A. Electromedical devices require special attention in relation to electromagnetic compatibility (EMC) and must be installed and operated in accordance with the EMC information provided in the following tables:

<table>
<tr><th colspan="3">Guidance and Manufacturer’s Declaration - Electromagnetic Emissions</th></tr>
<tr><td colspan="3">The NEURODYN 10 CHANNELS is intended for use in the electromagnetic environment specified below. The customer or the user of the NEURODYN 10 CHANNELS should ensure that it is used in such an environment.</td></tr>
<tr><th>Emission Test</th><th>Compliance</th><th>Electromagnetic environment - Guidance</th></tr>
<tr><td>RF Emissions
CISPR 11</td><td>Group 1</td><td rowspan="2">The NEURODYN 10 CHANNELS must emit electromagnetic energy in order to perform it’s intend function. Nearby electronic equipment may be affected.</td></tr>
<tr><td>RF Emissions
CISPR 11</td><td>Class B</td></tr>
<tr><td>Harmonic Emissions
IEC 61000-3-2</td><td>Applicable</td><td rowspan="2">The NEURODYN 10 CHANNELS is suitable for use in all establishments other than domestic those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.</td></tr>
<tr><td>Voltage fluctuations/ flicker emissions
IEC 61000-3-3</td><td>Applicable</td></tr>
</table>

Guidance and Manufacturer's Declaration - Electromagnetic Immunity			
The **NEURODYN 10 CHANNELS** is intended for use in the electromagnetic environment specified below. The customer or the user of the **NEURODYN 10 CHANNELS** should assure that it is used in such an environment.			
Immunity Test	**IEC 60601 Test Level**	**Compliance Level**	**Electromagnetic Environment - Guidance**
Electrostatic discharge (ESD) IEC 61000-4-2	± 6 kV by contact ± 8 kV by air	± 6 kV by contact ± 8 kV by air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Electrical fast transitory/burst IEC 61000-4-4	± 2 kV for power supply lines ± 1 kV for input/ output lines	± 2 kV for power supply lines ± 1 kV for input/ output lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	± 1 kV diferencial mode ± 2 kV common mode	± 1 kV diferencial mode ± 2 kV common mode	Mains power quality should be that of a typical commercial or hospital environment.

Guidance and Manufacturer's Declaration - Electromagnetic Immunity			
The **NEURODYN 10 CHANNELS** is intended for use in the electromagnetic environment specified below. The customer or the user of the **NEURODYN 10 CHANNELS** should assure that it is used in such an environment.			
Immunity Test	**IEC 60601 Test Level**	**Compliance Level**	**Electromagnetic Environment - Guidance**
Voltage dips, short interruptions and voltage variations in power input lines IEC 61000-4-11	< 5% U_T (> 95% voltage drops in U_T) 0.5 by cycle 40% U_T voltage drops in (60% U_T) by 5 cycles 70% U_T (30% voltage drops in U_T) by 25 cycles < 5% U_T (> 95% voltage drops in U_T) by 5 seconds	< 5% U_T (> 95% voltage drops in U_T)by 0,5 ciclo 40% U_T (60% de voltage drops in U_T)by 5 cycles 70% U_T (30% voltage drops in U_T) by 25 cycles < 5% U_T (> 95% voltage drops in U_T) by 5 seconds	Mains power quality should be that of a typical commercial or hospital environment. If the user of the **NEURODYN 10 CHANNELS** requires continued operation during power mains interruptions, it is needed that the **NEURODYN 10 CHANNELS** be powered from an uninterruptible power supply or battery.
Power frequency (50/60 Hz) magnetic fild IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
NOTE: U_T is the A.C. mains voltage prior to applications of the test level.			

Guidance and Manufacturer's Declaration - Electromagnetic Immunity			
The **NEURODYN 10 CHANNELS** is intended for use in the electromagnetic environment specified below. The customer or the user of the **NEURODYN 10 CHANNELS** should assure that it is used in such an environment.			
Immunity Test	**IEC 60601 Test Level**	**Compliance Level**	**Electromagnetic Environment - Guidance**
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	3 V	Portable and mobile RF communication equipment should not be used no closer to any part of **NEURODYN 10 CHANNELS**, including cable than be separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance d = 1.2 $\sqrt{P}$ d = 1.2 $\sqrt{P}$ 80 MHz to 800 MHz d = 2.3 $\sqrt{P}$ 800 MHz to 2.5 GHz
Radiated RF IEC 61000-4-3	10 V/m 80 MHz to 2.5 GHz	10 V/m	Where *p* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and *d* is the recommended separation distance in meters (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey,[a] should be less than the compliance level in each frequency range.[b]

Guidance and Manufacturer's Declaration - Electromagnetic Immunity			
The **NEURODYN 10 CHANNELS** is intended for use in the electromagnetic environment specified below. The customer or the user of the **NEURODYN 10 CHANNELS** should assure that it is used in such an environment.			
Immunity Test	**IEC 60601 Test Level**	**Compliance Level**	**Electromagnetic Environment - Guidance**
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	3 V	Interference may occur in the vicinity of equipment marked with the following symbol:
Radiated RF IEC 61000-4-3	10 V/m 80 MHz to 2.5 GHz	10 V/m	
NOTE 1: At 80 MHz and 800 MHz the higher frequency range applies. NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			
[a] Field strengths set by fixed transmitters, such as radio base stations, telephone (cellular/cordless) telephones and land mobile radios, amateur radio, AM / FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength at the location in which the **NEURODYN 10 CHANNELS** is used exceeds the applicable RF compliance level above, the **NEURODYN 10 CHANNELS** should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorientation or relocating the **NEURODYN 10 CHANNELS**. [b] Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 10 V/m.			

Recommended separation distances between the mobile RF communication equipment and NEURODYN 10 CHANNELS

The **NEURODYN 10 CHANNELS** is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the **NEURODYN 10 CHANNELS** can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the **NEURODYN 10 CHANNELS** as recommended below, according to the maximum output power of the communications equipment.

Rated maximum power output of transmitter **w**	**Separation distance according to frequency of transmitter m**		
	150 KHz to 80 MHz $d = 1.2 \sqrt{P}$	80 MHz to 800 MHz $d = 0.35 \sqrt{P}$	800 MHz to 2.5 GHz $d = 0.7 \sqrt{P}$
0.01	0.12	0.035	0.07
0.1	0.38	0.11	0.22
1	1.2	0.35	0.7
10	3.8	1.1	2.2
100	12	3.5	7

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: 80 MHz to 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

CONTROLS, INDICATORS AND CONNECTIONS

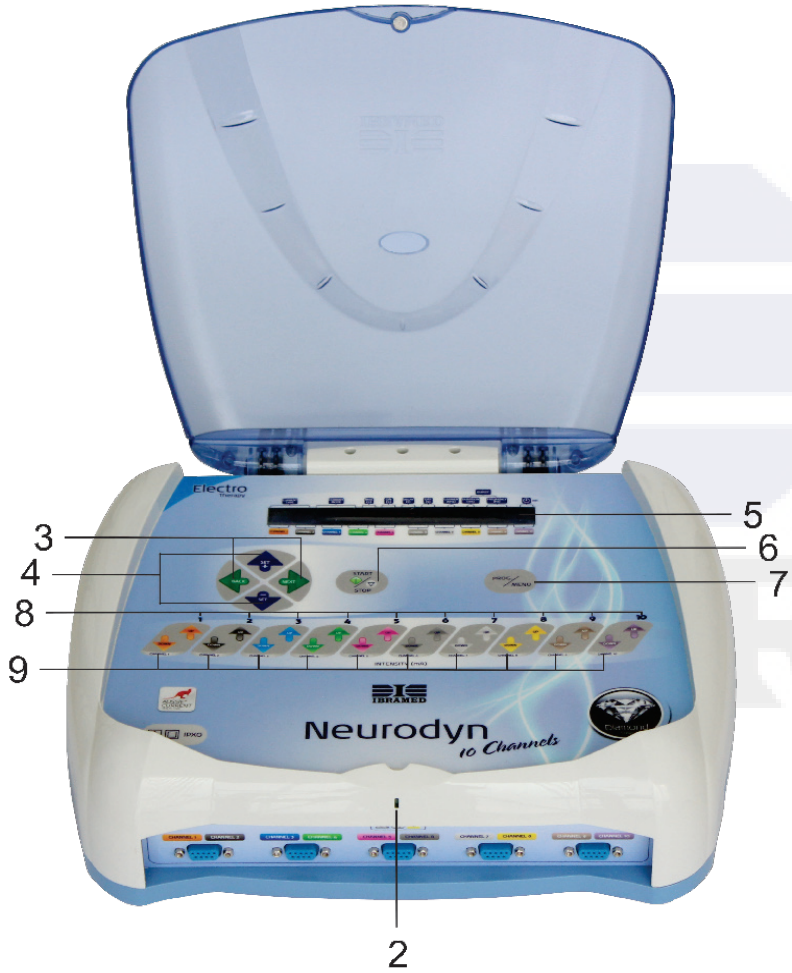


Figure 1. Upper Access Panel.

1- Power ON/OFF Switch.

2- Power On Indicator LED.

3- BACK/NEXT Buttons.

4- SET + /SET - Buttons.

5- LED Display.

6- START/STOP.

7- PROG/MENU Button. PROG: Clinical Resources Library; MENU: Select Language.

8- Channel indicator LEDs

9- UP/DOWN Buttons.

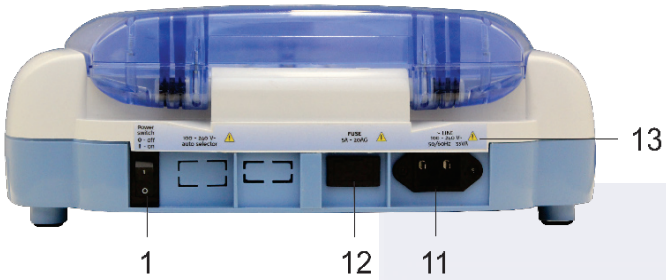


Figure 2. Rear Access Panel.

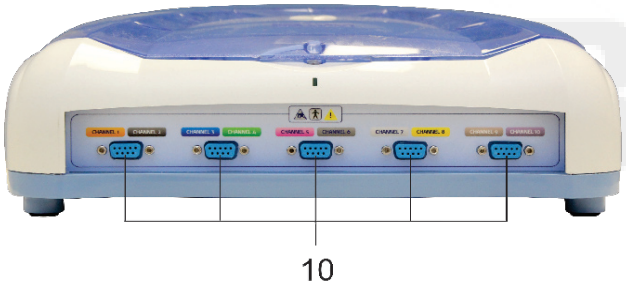


Figure 3. Front Access Panel.

Figure 4. Lower Access Panel.

10- Channel Lead Wire Connectors.

11- Line Cord Connection.

12- Fuse.

13- General Technical Information.

14- Current output Label characteristics.

15 - Serial Number.

16 - Federal Law (USA).

Read and Understand these symbols and their definitions before operating this equipment.

Before using and operating the **NEURODYN 10 CHANNELS** Electro Stimulator, please read and learn the symbols on the LCD device (Figure 5).

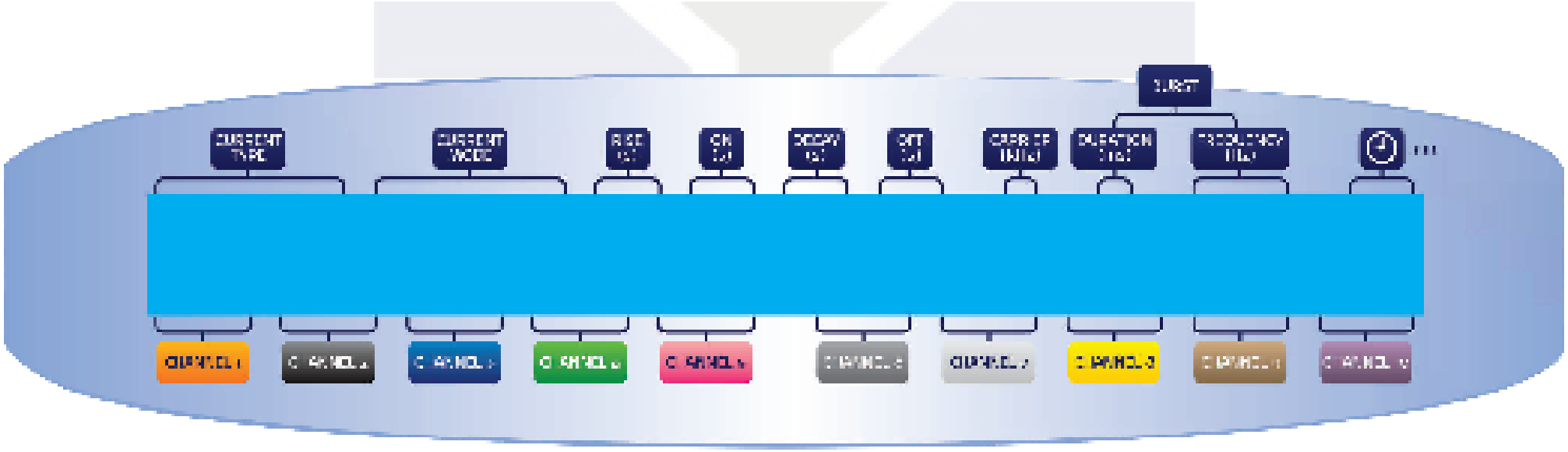


Figure 5. NEURODYN 10 CHANNELS LCD.

SYMBOL DEFINITIONS

Russian Current (**Russ.** and **Electrolypolisis**)
Aussie Current (**Aussie**)

Cont.: Continuous; **Sync.:** Synchronous; **Seq.:** Sequential; **Rec.:** Reciprocal;
Des.: Desobstruction.

Burst Duration Aussie Current: 2 ms or 4 ms.
Burst Duration Russian Current: 50%.

Burst Frequency Aussie Current: 1 Hz to 120 Hz.
Burst Frequency Russian Current: 1 Hz to 120 Hz.

Carrier Frequency Aussie Current: 1 kHz or 4 kHz.

Time of Increase Gradient: Russian Current and Aussie Current: 1 to 20 seconds.

Time of Muscular Contraction: Russian Current and Aussie Current: 1 to 60 seconds.

Time of Decrease Gradient: Russian Current and Aussie Current: 1 to 20 seconds.

Time of Muscular Relaxation: Russian Current and Aussie Current: 1 to 60 seconds.

Treatment Time: 1 to 60 minutes.

Channels 1 and 2 Lead Wire Connectors.

Channels 3 and 4 Lead Wire Connectors.

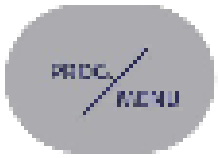
Channels 5 and 6 Lead Wire Connectors.

Channels 7 and 8 Lead Wire Connectors.

Channel 9 and 10 Lead Wire Connectors.

SYMBOL DEFINITIONS

Button used to start or stop the treatment. Always press the center key.



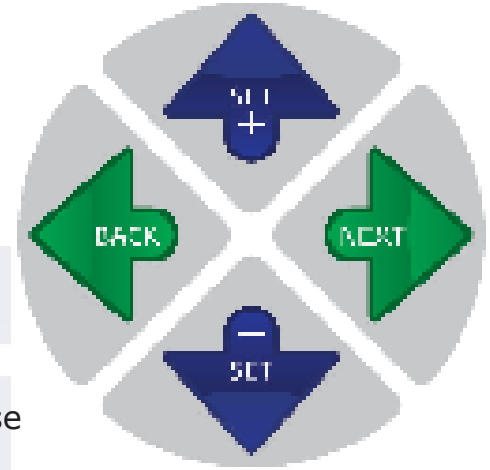
Dual function Button: PROG - selection of pre-programmed protocols (20 programs) or programming of new protocols; MENU - function menu to select language (Portuguese, English or Spanish).

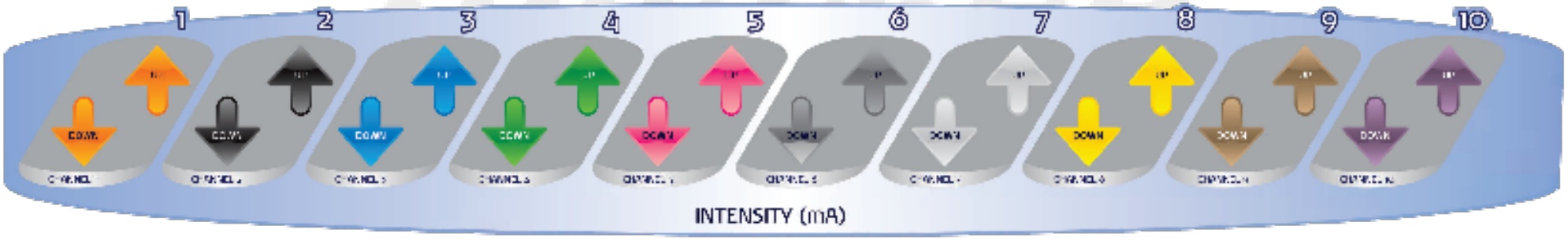
Move Next

Move Back

Parameters increase

Parameters decrease





Up or Down Intensity: Channels 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10. Observe the colors related to channels. Note the colors related to channels.

SYSTEM SPECIFICATIONS

Dimensions

Width: 17.5 cm (6.8'' in)

Depth: 31.5 cm in (12.40'')

Height: 12.5 cm (4.8'' in)

Standard Weight (without accessories): 2.5 kg

Power

Input: 100 / 240V~ 50/60 Hz

Input Power: 85 VA

Fuses: 5A 250V~ (20AG)

Electrical Class: CLASS II

Electrotherapy: TYPE BF

Regulatory Compliance

CE

IEC 60601-1

IEC 60601-1-2

IEC 60601-2-10

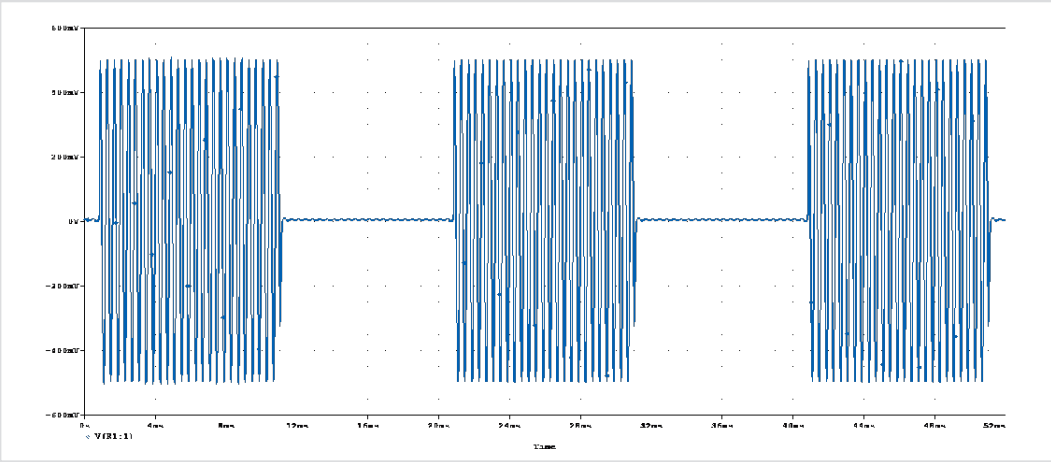
Temperature Range During Transport and Storage: Between 55 - 50 °C / 59 and 104°F.

Environment operating temperature range: 5 - 45 °C/ 41- 113 °F.

WAVEFORM SPECIFICATIONS

Russian Current

Russian Current is a medium frequency alternating current (2.5 kHz) modulated bursts with rectangular frequency 50 Hz and a duty cycle of 50% is used to produce muscle strengthening.



Output Mode: Electrodes

Output Intensity: 0-140 mA

Current Mode

- CNT: Continuous (1, 2, 3, 4, 5, 6, 7, 8, 9 &10 channels)
- SYN: Synchronous (1, 2, 3, 4, 5, 6, 7, 8, 9 &10 channels)
- REC: Reciprocal (1, 2, 3, 4, 5 & 6, 7, 8, 9, 10 channels)
- SEQ: Sequential (1, 2, 3, 4, 5, 6, 7, 8, 9 &10 channels)
- DES: Desobstruction (1, 2, 3, 4, 5, 6, 7, 8, 9 &10 channels)

Burst Duration: 50%

Burst Frequency: 1-120 Hz

Ramp

- Rise (Time of Increase Gradient): 1-20 s
- On (Time of Muscular Contraction): 1-60 s
- Decay (Time of Decrease Gradient): 1-20 s
- Off (Time of Muscular Relaxation): 1-60 s

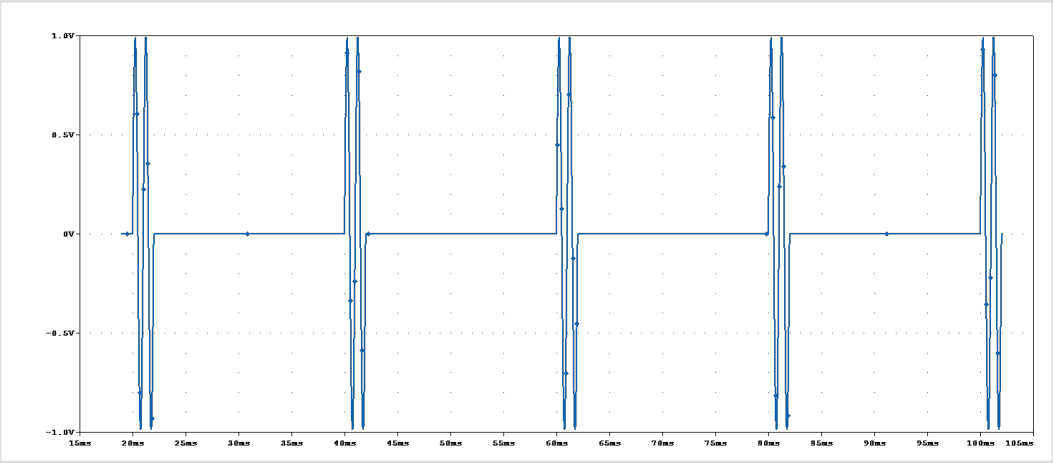
Treatment Time: 1-60 min

Set Intensity: Individual Channel Intensity Setting

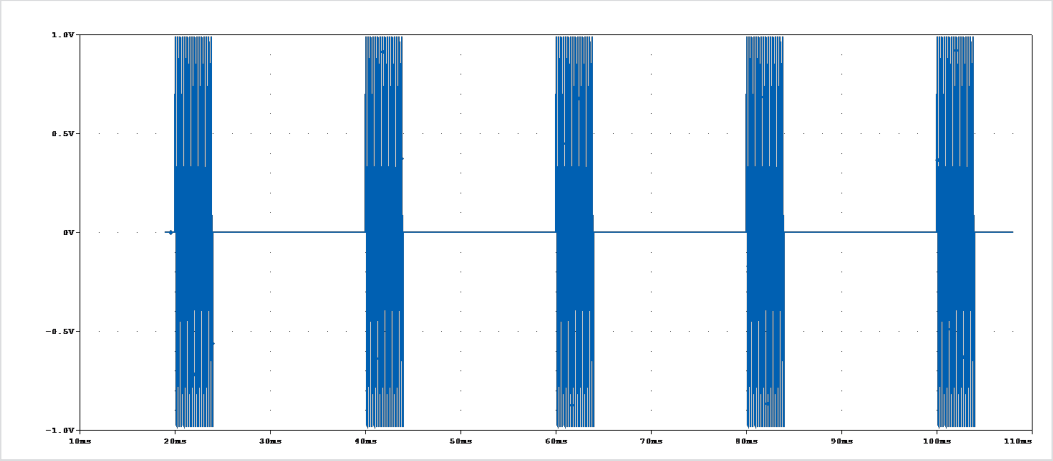
Available on Channels: 1, 2, 3, 4, 5, 6, 7, 8, 9 or 10 Option

Aussie Current

The Aussie current (Australian current) is a medium frequency alternating current released in short bursts (1 kHz / burst duration of 2 ms or 4 kHz / burst length of 4 ms) used to produce maximum muscle torque or analgesia respectively.



1 kHz/2 ms



4 kHz/4 ms

Output Mode: Electrodes

Output Intensity: 0-140 mA

Current Mode

- CNT: Continuous (1, 2, 3, 4, 5, 6, 7, 8, 9 &10 channels)
- SYN: Synchronous (1, 2, 3, 4, 5, 6, 7, 8, 9 &10 channels)
- REC: Reciprocal (1, 2, 3, 4, 5 & 6, 7, 8, 9, 10 channels)
- SEQ: Sequential (1, 2, 3, 4, 5, 6, 7, 8, 9 &10 channels)
- DES: Desobstruction (1, 2, 3, 4, 5, 6, 7, 8, 9 &10 channels)

Burst Duration: 2 or 4 ms

Carrier Frequency: 1 or 4 kHz

Burst Frequency: 1-120 Hz

Ramp

- Rise (Time of Increase Gradient): 1-20 s
- On (Time of Muscular Contraction): 1-60 s
- Decay (Time of Decrease Gradient): 1-20 s
- Off (Time of Muscular Relaxation): 1-60 s

Treatment Time: 1-60 min

Set Intensity: Individual Channel Intensity Setting

Available on Channels: 1, 2, 3, 4, 5, 6, 7, 8, 9 or 10 Option

RUSSIAN CURRENT and **AUSSIE CURRENT:** pin connector cables with banana ends (2 mm) and conductive rubber electrodes and neutral gel (Figure 6).

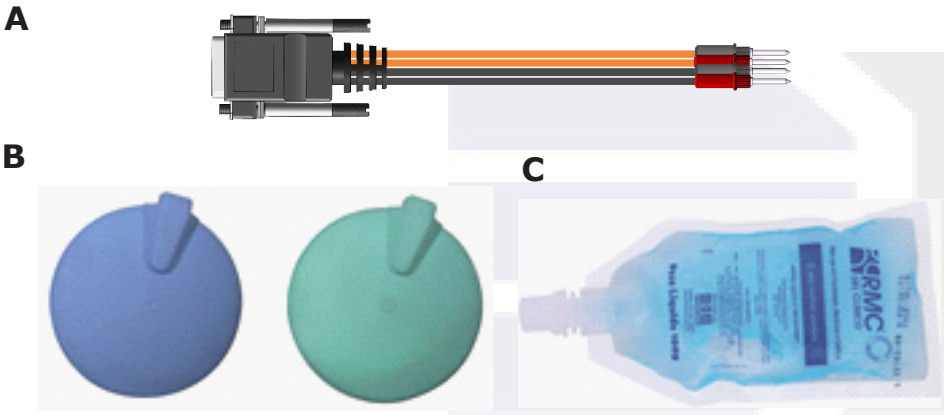


Figure 6. A. Pin cables with banana ends (2 mm) (in the same cable has two channels with individual controls); **B.** Conductive electrodes.

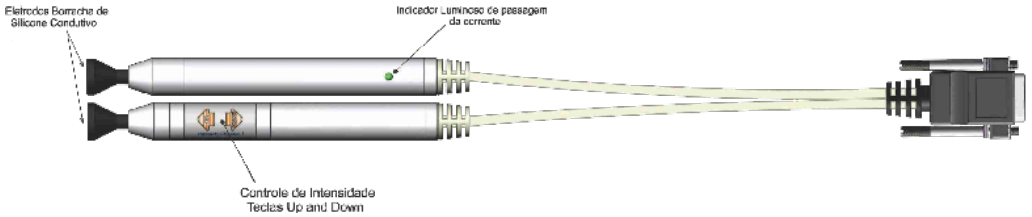

Eletrodos Borracha de Silicone Condutivo
Indicador Luminoso de passagem da corrente
Controle de Intensidade Teclas Up and Down

Figure 7. Pens for facial stimulation with conductive electrodes on the tips.

ELECTROLIPOLYSIS

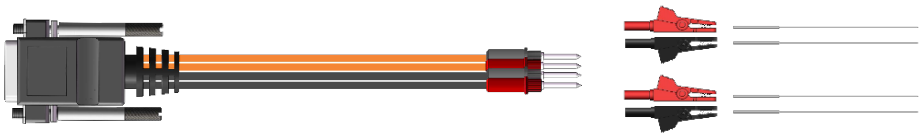


Figure 8. Pin cables with banana ends (2 mm) connected to alligator clip adapters to fix the needles to electrolypolisis (in the same cable has two channels with individual controls).

CAUTION

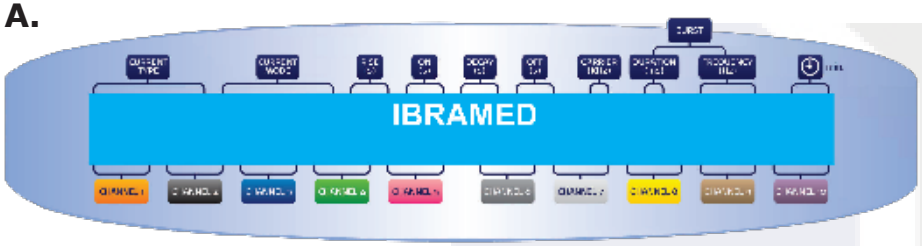
The connector screws must be firmly affixed to your connection on the back panel of the device.

To remove the electrodes conductive rubber pins banana is required to pull them by their protective cover, never pull the cord.

Prepare Device

Turn the power switch. LCD displays the message device presentation for a few seconds, followed by the software model of the device default screen programming (Figure 9).

A.



B.

C.

Figure 9. A. and **B.** LCD Messages; **C. NEURODYN 10 CHANNELS** Electro Stimulator Default Screen.

Note that entering the default screen will cause the word **Russ**. to flash. This is to do with the 'selection cursor parameters' function which displays whenever the device is being programmed.

Edit Waveform Parameters

The **BACK/NEXT** buttons allow you to select the parameters required for the treatment. Press the NEXT button for the cursor to move to the next parameter. Press the BACK button for the cursor to move back to the previous setting.
The **SET + / SET -** buttons allow you to select the values of each parameter required for the treatment.

Select Waveform

Press **SET +** or **SET -** to select the device waveform you want to use for the treatment: RUSSIAN CURRENT (Burst Modulated Medium Frequency) or AUSSIE CURRENT (Burst Modulated Medium Frequency).

Time Parameters

Set the session time. At the end of the scheduled time, you will hear a beep indicating that the emission current has been interrupted. Press the STOP button, the sound signal turns

off and the equipment goes back to the programming status.

Prepare and Install Patient Switch

Prepare the patient for therapy as described and read about the use of electrodes.

Start Treatment:

Press the **START** button to begin therapy session.

Stop Treatment:

Press the **STOP** button to end therapy session.

Waveform Intensity

The Waveform Intensity may be increased or decreased at any time during the session. Press the **INTENSITY** button up or down.

Example: Suppose that to treat a specific pathology, you need to select the following parameters:

Current Type: Aussie (Aussie Current)
Current Mode: Sync. (Synchronous)
Carrier Frequency = 1 kHz
Burst frequency = 60 Hz
Burst Duration= 4 ms
Rise= 3 s
On= 2 s
Decay= 2 s
Off= 5 s
Treatment time= 15 min

1. Connect the equipment to start programming the pattern described above. Note the blinking cursor in the **CURRENT TYPE** field.

2. Press the **SET +** button until Aussie (Aussie Current) displays, as shown below:

3. With the **NEXT/BACK** and **SET + / SET -** keys, scroll through the other parameters and select the values shown in the example.

4. Now press the **START** button to start treatment. Note that the "flashing" cursor disappears while the LDC display now shows the intensity.

5. Press the **UP** or **DOWN** channel in use to select the amount of current needed to treat.

6. At the end of the programmed time, the emission current is interrupted and an audible alarm will signal the treatment end.

7. Press the **STOP** button to stop the alarm. The equipment can now be switched off, repeat the same programming task, or undertake a new programming task.

ELECTROTHERAPY PATIENT PREPARATION

- Electrode Placement can be achieved using the Bipolar or Monopolar Techniques. Proper positioning and contact will insure treatment comfort and efficiency.
- Examine the skin for any wounds and clean the treatment area by rubbing the skin with medical grade alcohol.
- Before placing the electrodes, clean the area with soft soap and water to remove oil and possible skin fragments, thus reducing the resistance to the passage of the electrical current. Rinse and dry the area well before placing the electrodes.
- Remove the self-adhesive electrodes from the protective backing and apply to the treatment area as prescribed.
- Ensure the entire electrode surface is in contact with patient skin by pressing into place.
- Check the electrode contact regularly during treatment.
- Examine the skin again after the treatment.

ELECTRODE POSITIONING

Bipolar Electrode Placement Technique

Bipolar Electrode Placement Techniques should be used to provide stimulation to larger muscle groups, such as the quadriceps or the hamstrings. Equal size electrodes are placed at each end of the muscle or muscle group. The symmetrical waveforms of the Biphasic and Medium Frequency are usually applied to the body using the Bipolar Technique. The **NEURODYN 10 CHANNELS** Electro Stimulator offers waveforms of the **RUSSIAN CURRENT** and **AUSSIE CURRENT**.

Figure 10. Bipolar Electrode Placement Technique.

Monopolar Electrode Placement Technique

The Monopolar Electrode Placement Technique has been found to be especially useful for muscle stimulation of the upper extremities and small muscle groups. The smaller electrode is placed over the muscle motor

point and the larger electrode is placed over the painful area. Monopolar Techniques may be used with the Waveforms Symmetrical Biphasic and Medium Frequency. The **NEURODYN 10 CHANNELS** Electro Stimulator offers Waveforms of the **RUSSIAN CURRENT** and **AUSSIE CURRENT.**

Figure 11. Monopolar Electrode Placement Technique.

Facial Electrode Placement Technique

Facial Electrode Placement Techniques should be used to provide stimulation to facial muscles groups. Electrodes are placed at each end of the muscle or muscle group. The symmetrical waveforms of the Biphasic and Medium Frequency are usually applied to the face using the Facial Technique. The **NEURODYN 10 CHANNELS** Electro Stimulator offers waveforms of the **RUSSIAN CURRENT** and **AUSSIE CURRENT**.

Figure 12. Facial Electrode Placement Technique.

Electrolypolisis Electrode-Needles Placement Technique

The **NEURORYN 10 CHANNELS** offers the possibility

subcutaneous stimulator for treatment with Electrolipolysis for treatment of localized fat (Aesthetics Medicine) and Electro-Acupuncture (Practice of Medicine Chinese Acupuncture). We suggest Vinco Brand Acupuncture

A.

B.

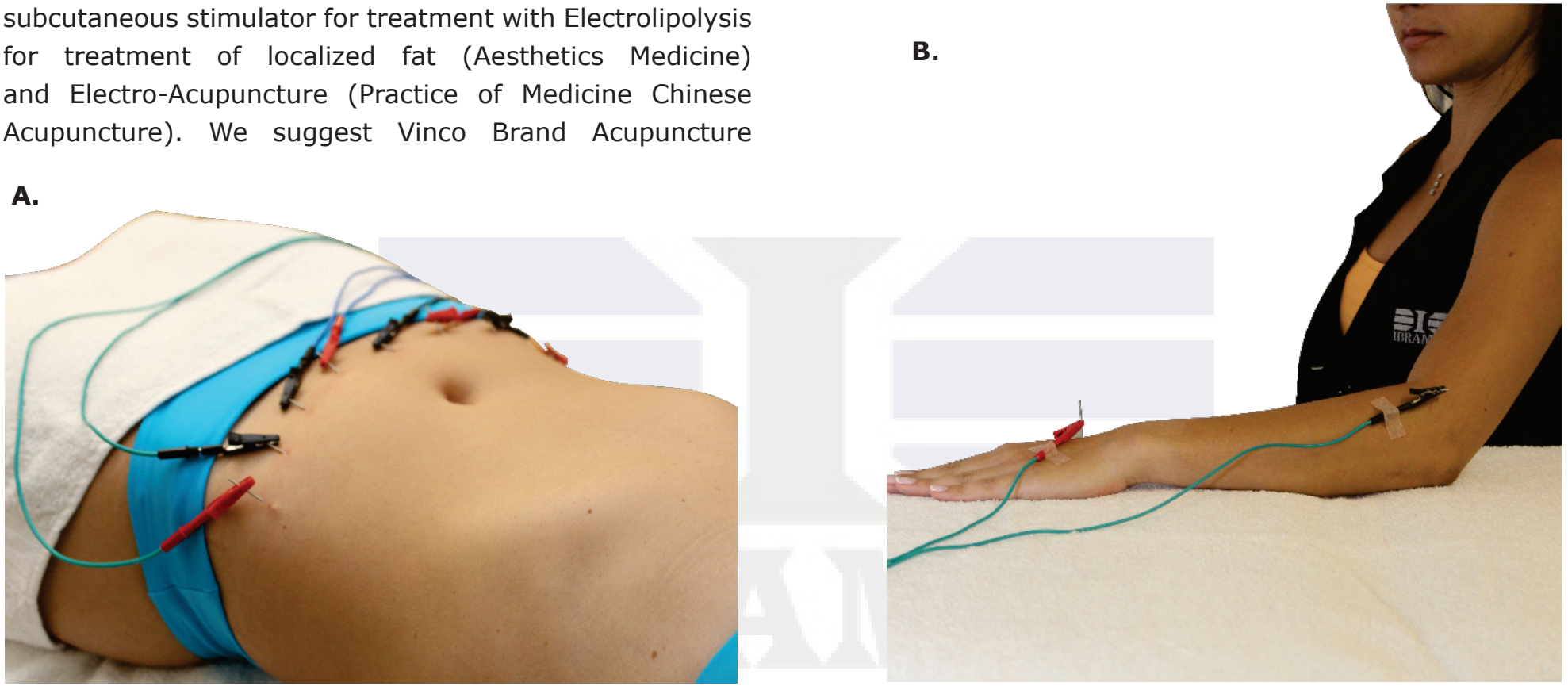


Figure 13. A. Electrolypolisis and **B.** Electro-Acupuncture Electrode-Needles Placement Technique.

WARNING

Placement of the electrodes near the chest may increase the risk of cardiac fibrillation.

Electrode Sizes and Current Density

The size of the electrodes and the energy density used during therapy must comply with IEC 60601-2-10, i.e., the current density per area of electrode should not exceed 2 mA/cm2. Follow the manufacturer's instructions.

We recommend the use of electrodes provided by Axelgaard Manufacturing Co., Ltd. Fallbrook, CA 92028, USA. FAX +1 (760) 723 2356. www.axelgaard.com.

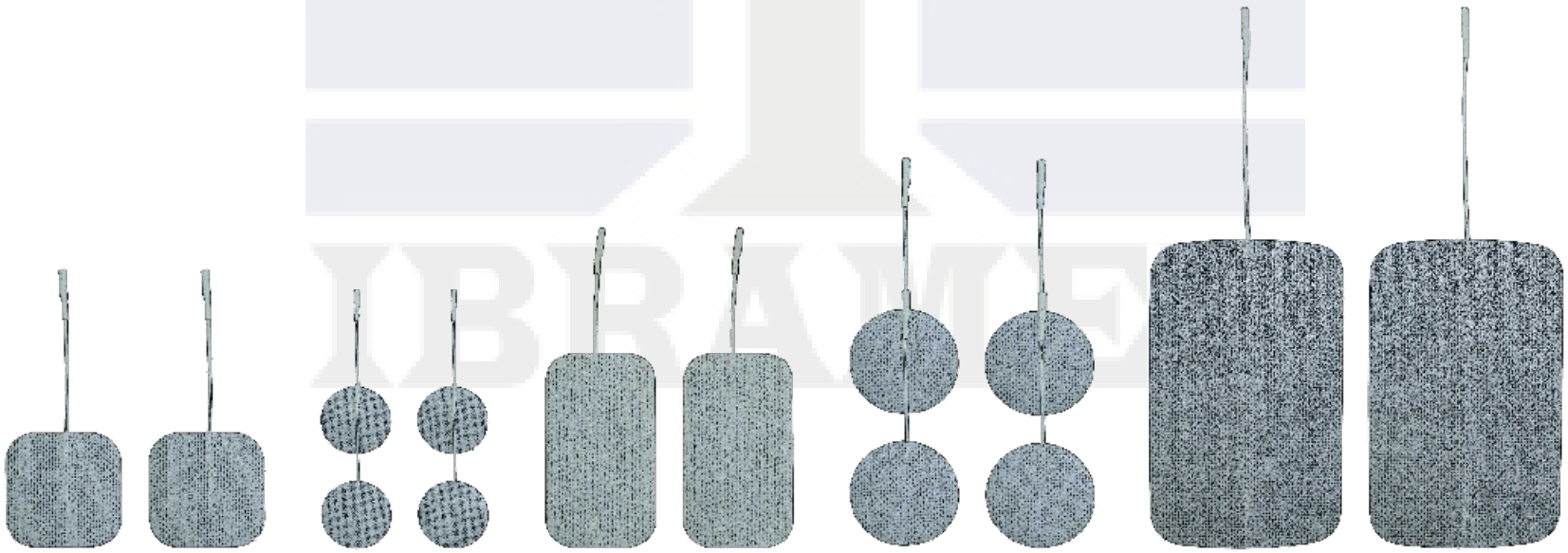


Figure 14. Electrode sizes and current density.

USING THE MENU BUTTON

The **PROG/MENU** button is used to select the language. Press **PROG/MENU** until you hear three "beeps." Select the desired language: 'Português', 'Español or 'English' (Figure 15). Short press **PROG/MENU** to set the chosen language.

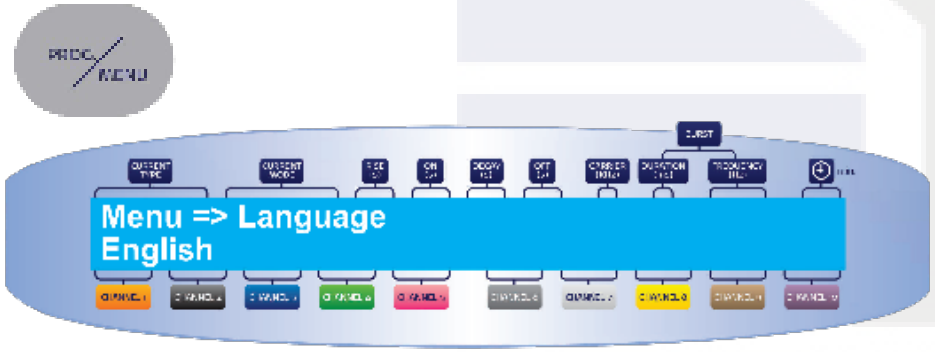


Figure 15. LCD displays the selected language.

USING THE PROG BUTTON

Connect the equipment as described above. Briefly press **PROG** and the following information will appear on the LCD (Figure 16). This is the first equipment to offer a choice of Treatment Protocols. Use the **SET + / SET -** buttons to select another protocol.

Figure 16. Selection of Treatment Protocols - Prog 1.

If this is the protocol chosen, press the **PROG** key once again. The LCD displays the parameters of the equipment scheduled for the selected protocol (Figure 17). Then simply press the **START** button and select the desired current density.

Proceed the same way to select any of the 8 protocols available. Simply follow the steps above.

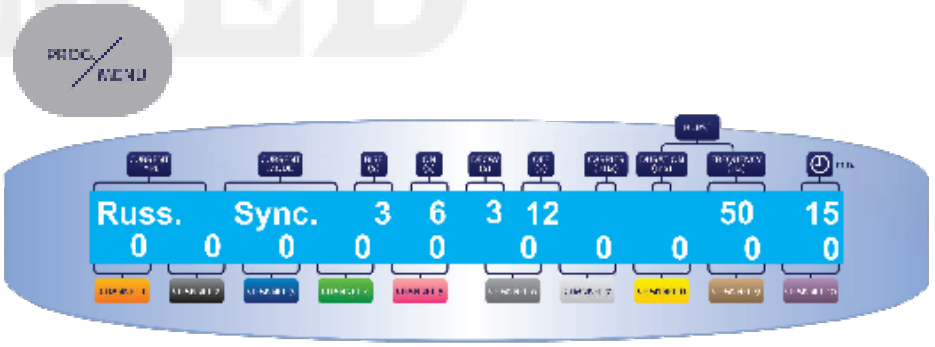


Figure 17. Parameters of the Pre-Programmed Protocol 1 Program.

PROGRAMMING USER PROTOCOLS

To program new protocols, briefly press the key **PROG**. With the **SET +** or **SET -** buttons choose one of the available protocols from User 01 to 10. Enter the parameters according to therapeutic needs. Press **START**. The last set parameters will be recorded in the device memory. To access Protocols saved by the user, simply select the **PROG** key and the **SET +** or **SET -** keys to choose the protocol number desired (Figure 18).

Figure 18. User 01 Protocol.

Prog: 1 – Russ.	
Original Russian current for flaccidity 1– IIa fibers	**Parameters values**
Description: Increase of muscular strength, emphasis on type IIa fibers (initial phase).	
Current Mode	Sync. (Synchronous)
Burst Frequency	50 Hz
Rise	3 s
On	6 s
Decay	3 s
Off	12 s
Treatment time	15 min
Intensity	Strong motor stimulation
Positioning of electrodes	Bipolar

Prog: 2 - Russ.	
Original Russian current for flaccidity 2 - IIa Fibers	**Parameters values**
Description: Increase of muscular strength, emphasis on type IIa fibers (intermediate phase).	
Current Mode	Sync. (Synchronous)
Burst Frequency	50 Hz
Rise	3 s
On	9 s
Decay	3 s
Off	15 s
Treatment time	15 min
Intensity	Strong motor stimulation
Positioning of electrodes	Bipolar

Prog: 3 - Russ.	
Original Russian current for flaccidity 3 - IIa Fibers	**Parameters values**
Description: Increase of muscular strength, emphasis on type IIa fibers (advanced phase).	
Current Mode	Sync. (Synchronous)
Burst Frequency	50 Hz
Rise	3 s
On	12 s
Decay	3 s
Off	18 s
Treatment time	15 min
Intensity	Strong motor stimulation
Positioning of electrodes	Bipolar

Prog: 4 - Russ.	
Original Russian current for flaccidity 1 - IIb Fibers	**Parameters values**
Description: Increase of muscular strength, emphasis on type IIb fibers (initial phase).	
Current Mode	Sync. (Synchronous)
Burst Frequency	70 Hz
Rise	3 s
On	6 s
Decay	3 s
Off	12 s
Treatment time	15 min
Intensity	Strong motor stimulation
Positioning of electrodes	Bipolar

Prog: 5 - Russ.	
Original Russian current for flaccidity 2 - IIb Fibers	**Parameters values**
Description: Increase of muscular strength, emphasis on type IIb fibers (intermediate phase).	
Current Mode	Sync. (Synchronous)
Burst Frequency	70 Hz
Rise	3 s
On	9 s
Decay	3 s
Off	15 s
Treatment time	15 min
Intensity	Strong motor stimulation
Positioning of electrodes	Bipolar

Prog: 6 - Russ.	
Original Russian current for flaccidity 3 - IIb Fibers	**Parameters values**
Description: Increase of muscular strength, emphasis on type IIb fibers (advanced phase).	
Current Mode	Sync. (Synchronous)
Burst Frequency	70 Hz
Rise	3 s
On	12 s
Decay	3 s
Off	18 s
Treatment time	15 min
Intensity	Strong motor stimulation
Positioning of electrodes	Bipolar

Prog: 7 – Russ.	
Russian current for lymphatic drainage	**Parameters values**
Description: Stimulation for increase of lymphatic drainage.	
Current Mode	Seq. (Sequential) – 4 channels
Burst Frequency	35 Hz
Rise	3 s
Treatment time	4 min
Intensity	Above threshold motor
Positioning of electrodes	Bipolar from distal to proximal in the direction of the lympho nodes.

Prog: 8 - Aussie	
Aussie current for flaccidity 1 - IIa fibers	**Parameters values**
Description: Increase of muscular strength, emphasis on type IIa fibers (initial phase).	
Current Mode	Sync. (Synchronous)
Carrier Frequency	1 Hz
Burst Duration	2 ms
Burst Frequency	50 Hz
Rise	3 s
On	6 s
Decay	3 s
Off	12 s
Treatment time	20 min
Intensity	Strong motor stimulation
Positioning of electrodes	Bipolar

Prog: 9 - Aussie	
Aussie current for flaccidity 2 - IIa fibers	**Parameters values**
Description: Increase of muscular strength, emphasis on type IIa fibers (intermediate phase).	
Current Mode	Sync. (Synchronous)
Carrier Frequency	1 Hz
Burst Duration	2 ms
Burst Frequency	50 Hz
Rise	3 s
On	9 s
Decay	3 s
Off	15 s
Treatment time	20 min
Intensity	Strong motor stimulation
Positioning of electrodes	Bipolar

Prog: 10 - Aussie	
Aussie current for flaccidity 3 – IIa fibers	**Parameters values**
Description: Increase of muscular strength, emphasis on type IIa fibers (advanced phase).	
Current Mode	Sync. (Synchronous)
Carrier Frequency	1 Hz
Burst Duration	2 ms
Burst Frequency	50 Hz
Rise	3 s
On	12 s
Decay	3 s
Off	18 s
Treatment time	20 min
Intensity	Strong motor stimulation
Positioning of electrodes	Bipolar

Prog: 11 - Aussie	
Aussie current for flaccidity 1 – IIb fibers	**Parameters values**
Description: Increase of muscular strength, emphasis on type IIb fibers (initial phase).	
Current Mode	Sync. (Synchronous)
Carrier Frequency	1 Hz
Burst Duration	2 ms
Burst Frequency	50 Hz
Rise	3 s
On	9 s
Decay	3 s
Off	15 s
Treatment time	20 min
Intensity	Strong motor stimulation
Positioning of electrodes	Bipolar

Prog: 12 - Aussie	
Aussie current for flaccidity 2 – IIb fibers	**Parameters values**
Description: Increase of muscular strength, emphasis on type IIb fibers (intermediate phase).	
Current Mode	Sync. (Synchronous)
Carrier Frequency	1 Hz
Burst Duration	2 ms
Burst Frequency	70 Hz
Rise	3 s
On	9 s
Decay	3 s
Off	15 s
Treatment time	20 min
Intensity	Strong motor stimulation
Positioning of electrodes	Bipolar

Prog: 13 - Aussie	
Aussie current for flaccidity 3 - IIb fibers	**Parameters values**
Description: Increase of muscular strength, emphasis on type IIb fibers (advanced phase).	
Current Mode	Sync. (Synchronous)
Carrier Frequency	1 Hz
Burst Duration	2 ms
Burst Frequency	70 Hz
Rise	3 s
On	12 s
Decay	3 s
Off	18 s
Treatment time	20 min
Intensity	Strong motor stimulation
Positioning of electrodes	Bipolar

Prog: 14 - Aussie	
Strengthening for athletes	**Parameters values**
Description: Increase of the muscular strength in health individuals	
Current Mode	Sync. (Synchronous)
Carrier Frequency	1 Hz
Burst Duration	2 ms
Burst Frequency	50 Hz
Rise	1 s
On	9 s
Decay	1 s
Off	50 s
Treatment time	20 min or the number of required contractions
Intensity	Motor stimulation at maximum muscular contraction
Positioning of electrodes	Bipolar or monopolar

Prog: 15 - Aussie	
Motor re-education	**Parameters values**
Description: For motor facilitation and motor re-learning	
Current Mode	Sync. (Synchronous)
Carrier Frequency	4 kHz
Burst Duration	4 ms
Burst Frequency	50 Hz
Rise	1 s
On	3 s
Decay	1 s
Off	3 s
Treatment time	15 min
Intensity	Above threshold motor
Positioning of electrodes	Bipolar or monopolar

Prog: 16 - Aussie	
Strengthening following disuse atrophy	**Parameters values**
Description: For patients that present muscular atrophy due to lack of use	
Current Mode	Sync. (Synchronous)
Carrier Frequency	1 kHz
Burst Duration	4 ms
Burst Frequency	15 Hz
Rise	1 s
On	9 s
Decay	1 s
Off	9 s
Treatment time	20 min
Intensity	Above threshold motor
Positioning of electrodes	Bipolar or monopolar

Prog: 17 - Aussie	
FES post-stroke	**Parameters values**
Description: Electrical functional stimulation after stroke to prevent muscular atrophy due to lack of use, prevent the shoulder sub-luxation after stroke and to facilitate the motor re-learning	
Current Mode	Sync. (Synchronous)
Carrier Frequency	4 kHz
Burst Duration	4 ms
Burst Frequency	15 Hz
Rise	1 s
On	9 s
Decay	1 s
Off	9 s
Treatment time	15 min
Intensity	Above threshold motor
Positioning of electrodes	Bipolar or monopolar

Prog: 18 - Aussie	
Oedema reduction/ lymphatic drainage	**Parameters values**
Description: To control and reduce the edema as well as for lymphatic drainage procedures	
Current Mode	Sync. (Synchronous)
Carrier Frequency	4 kHz
Burst Duration	4 ms
Burst Frequency	35 Hz
Rise	1 s
On	5 s
Decay	1 s
Off	4 s
Treatment time	20 min
Intensity	Above threshold motor
Positioning of electrodes	Bipolar: in the center of the skeletal muscles that correlates directly with the edema

Prog: 19 - Aussie	
Pain control (ascending mechanism)	**Parameters values**
Description: Modulation of pain through activation of the ascending mechanism to promote analgesia by activation of the pain gate	
Current Mode	Cont. (Continuous)
Carrier Frequency	4 kHz
Burst Duration	4 ms
Burst Frequency	100 Hz
Treatment time	20 min. Short and preferably equal to the time of a second intervention, such as kinesiotherapy exercises
Intensity	Intense sensorial stimulation
Positioning of electrodes	Bipolar: on the dermatome related to the referred pain

Prog: 20 - Aussie	
Pain control (descending mechanism)	**Parameters values**
Description: Modulation of pain through activation of the descending mechanism to promote the analgesia by release of endorphins	
Current Mode	Cont. (Continuous)
Carrier Frequency	4 kHz
Burst Duration	4 ms
Burst Frequency	100 Hz
Treatment time	20 min
Intensity	Intense sensorial stimulation
Positioning of electrodes	Bipolar: one pair of electrodes positioned on the pain point and the other pair of electrodes on the neural root corresponding to the pain point

Prog: 21 - Aussie	
Electrolipolysis 1	**Parameters values**
Description: Stimulation of lipolysis in the treatment of fat located	
Current Mode	Cont. (Continuous)
Carrier Frequency	4 kHz
Burst Duration	4 ms
Burst Frequency	10 Hz
Treatment time	30 min
Intensity	According to the sensitivity and patient's tolerance
Positioning of needles-electrodes	Bipolar: cables with banana probe (2 mm), alligator clip adapters and acupuncture needles, which must be inserted in pairs at the place of treatment, respecting the techniques for inserting the needle properly into the tissue.

Prog: 22 - Aussie	
Electrolipolysis 2	**Parameters values**
Description: Stimulation of lipolysis in the treatment of fat located	
Current Mode	Cont. (Continuous)
Carrier Frequency	4 kHz
Burst Duration	4 ms
Burst Frequency	30 Hz
Treatment time	30 min
Intensity	According to the sensitivity and patient's tolerance.
Positioning of needles-electrodes	Bipolar: cables with banana probe (2 mm), alligator clip adapters and acupuncture needles, which must be inserted in pairs at the place of treatment, respecting the techniques for inserting the needle properly into the tissue.

Prog: 23 - Aussie	
Electro-Acupuncture Low Frequency	**Parameters values**
Description: Use of electro-acupuncture for diseases and disorders that can be treated with acupuncture	
Current Mode	Cont. (Continuous)
Carrier Frequency	4 kHz
Burst Duration	4 ms
Burst Frequency	2 Hz
Treatment time	10 min
Intensity	Intense sensorial stimulation
Positioning of needles-electrodes	Acupuncture points

Prog: 24 - Aussie	
Electro-Acupuncture High Frequency	**Parameters values**
Description: Use of electro-acupuncture for diseases and disorders that can be treated with acupuncture	
Current Mode	Cont. (Continuous)
Carrier Frequency	4 kHz
Burst Duration	4 ms
Burst Frequency	100 Hz
Treatment time	10 min
Intensity	Intense sensorial stimulation
Positioning of needles-electrodes	Acupuncture points

Prog: 01 to 10 - User Protocols

REFERENCES

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ACCESSORIES ACCOMPANYING NEURODYN 10 CHANNELS

Ibramed **NEURODYN 10 CHANNELS** contains accessories designed to meet the requirements of electromagnetic comparability accessories (accessories code C-008, K-652; K-653; K-654; K-655; K-656).

PART NUMBER	QUANTITY	ITEM DESCRIPTION
C-008	**01**	Plug line cord (Length 1.5 m)
K-652	**01**	Electrotherapy Lead Wire Banana Plug - Channel 1– orange/Channel 2 black (1.5 m)
K-653	**01**	Electrotherapy Lead Wire Banana Plug - Channel 3 –blue / Channel 4 – green (1.5 m)
K-654	**01**	Electrotherapy Lead Wire Banana Plug - Channel 5 –pink / Channel – gray -– (1.5 m)
K-655	**01**	Electrotherapy Lead Wire Banana Plug - Channel 7 –white / Channel 8 – yellow (1.5 m)
K-656	**01**	Electrotherapy Lead Wire Banana Plug - Channel 9 –brown / Channel 10– purple (1.5 m)
G-066	**10**	Black alligator clip – Cod. GJ0705
G-067	**10**	Red alligator clip – Cod. GJ0705
E-284	**05**	Electrode - Valu Trode - Model CFF202 (four/electrode/pkg)
M-124	**01**	CD user manual
F-019	**01**	Protection fuse 20AG 5A
C-314	**01**	Protection Fuse Chart

Edit Waveform Parameters

This list of replacement accessories are designed for use with the **NEURODYN 10 CHANNELS** Electro Stimulator. When ordering, provide the respective part numbers, description, and quantity desired.

The use of accessories, cables and electrodes other than those intended for this specific equipment may significantly degrade the performance of the emissions and immunity. DO NOT USE accessories, cables and electrodes from **NEURODYN 10 CHANNELS** equipment on other equipment or medical electro systems.

What may initially look like a problem is rarely a defect. Before calling customer support, please check the items described below:

PROBLEMS	SOLUTIONS
The equipment does not turn on 1.	• Is the power cable properly connected? If not, connect it. Also check the wall socket.
The equipment does not turn on 2.	• Have you checked the safety fuse? Check if there is a bad contact. Check if the value is correct as stated in the instructions.
The equipment is turned on but does not emit current to patient 1.	• Have you followed the recommendations for correct use the equipment as mentioned in the instructions? Check and repeat the steps in the controllers, indications and operation section.
The equipment is turned on but does not emit current to patient 2.	• Have you checked the electrodes and the connecting cables to the patient? Check if the cable plug is adequately inserted in the equipment. Check if the electrodes are adequately placed on the patient's body.
The equipment does not turn on and/or work properly.	• Check if the amount of gel is enough. • Check if the electrodes are worn properly.

MAINTENANCE

For safe use of the equipment, it is recommended to have it inspected and undergo preventive maintenance at IBRAMED or an authorized technical center every 12 months. The manufacturer IBRAMED only assumes liability for the technical features and equipment safety provided the unit is used according to the instructions for use contained in the manual, when maintenance, repairs and modifications are undertaken solely by the factory or authorized agents, and in the event of a breakdown when the components that can cause a security risk to the appliance are replaced by original spare parts. If requested, IBRAMED will provide technical documentation (circuit diagrams, lists of parts and components etc) necessary for the repair of any equipment. We assume no responsibility for repairs without prior explicit written permission from IBRAMED.

WARRANTY

IBRAMED, Indústria Brasileira de Equipamentos Médicos EIRELI, here identified to the consumer through the following address and telephone number: Av. Dr. Carlos Burgos, 2800, Jd Itália, Amparo/SP; Tel.: 55 19 3817 9633 provides product-warranty for eighteen (18) months insofar as the conditions set for warranty terms are followed by the user as mentioned below.

WARRANTY TERMS

1) IBRAMED warrants that this product is free of manufacturing defects for eighteen (18) continuous months, provided the set terms presented in these instructions for use are followed.

2) The warranty period takes effect from the date of purchase and applies to the original purchaser only, even in the event of a product being transferred to a third party. The warranty covers the replacement of component parts and labor required to repair defects whenever the presence of such manufacturing defects can be determined.

3) Customer Service during the warranty period will be provided exclusively at IBRAMED sale points by IBRAMED itself or another agent designated by the manufacturer.

4) The warranty does not cover damage caused to the product resulting from:

a) Failure to follow the specifications and recommendations detailed in these instructions for use during installation or use of the product.

b) Accidents or acts of God, connections to electrical system with inappropriate voltage and/or subjected to excessive fluctuation or overcharge.

c) Misuse, lack of reasonable care, product alterations, modifications or repairs undertaken by individuals or repairs undertaken by individuals or entities not authorized by IBRAMED.

d) Removal or adulteration of the equipment serial number.

e) Damage during Transport.

5) The legal warranty does not cover: expenses incurred during product installation or transport to the plant or sale point, labor, materials, parts and adjustments necessary to the readiness of the premises in view of the installation of the device, such as but not limited to electric net, masonry, hydraulic network, grounding system, as well as their requirements.

6) The warranty does not cover parts subjected to natural wear, such as but not limited to control buttons, control keys, handles and moving parts, radiofrequency applicators, cooling applicator, cables, connectors, device cabinets, pedal, infrared thermometer.

7) The selling points are neither authorized to alter the conditions mentioned in this document nor take any commitment on behalf of IBRAMED.

TECHNICAL ASSISTANCE

If you have any doubts or problems related to the operation of your equipment, please contact:

IBRAMED USA REPRESENTATIVE
18851 NE 29th Avenue
Suite 720
Aventura; Florida USA
Zip Code: 33180
Telephone: 305.377.0077 or 305.206-6777
E-mail: posvendas@ibramed.com.br
Website: www.ibramed.com.br

DANGER

Do not alter this equipment. Any unauthorized modification can affect the safety of this equipment.
Never make unauthorized repairs.

CEFAI – IBRAMED Center for Education and Advanced Training

IBRAMED Equipment goes beyond technology. It also provides knowledge! Science constitutes our differential value and we effectively take advantage of its benefits in order to ensure patient safety and thereby maximize results.

Access to the knowledge database is guaranteed by CEFAI (IBRAMED Center for Education and Advanced Training) whose goal is to provide technical and scientific support as well as current literature on therapies and their applicability while our treatment choices are always thoroughly selected according to the best and latest clinical criteria.

IBRAMED Scientific Committee designs scientific support in view of developing new products and services and so all our equipment and actions are based on the results of the most recent medical studies published in major scientific journals.

CEFAI takes into account the personal and professional development of all its partners and customers. With our "Hold My Hand" concept, we invite both students and professionals in the fields of Physical Rehabilitation, Esthetics, Physiotherapy, Dermatology and Esthetic Medicine to take part in free courses, workshops, and the best Postgraduate Lato Sensu courses in the areas of physical rehabilitation and esthetics. Special attention is also given to those interested in visiting our structure.

Whatever your professional development needs, we'll be right by your side to provide you with unconditional support.

We are happy to assist you!
Contact – marketing@ibramed.com.br
55 19 3817. 9633

Thanks,

IBRAMED – A matter of respect!

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